

Fig. 1 (Prior Art)

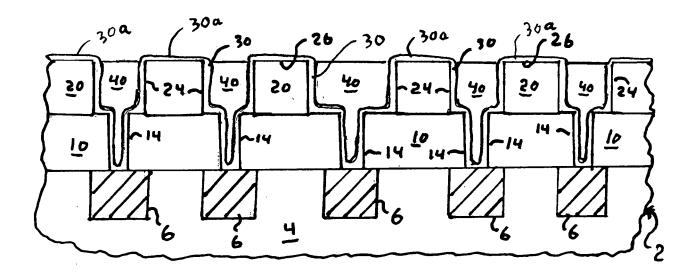


Fig. 2 (Prior Art)

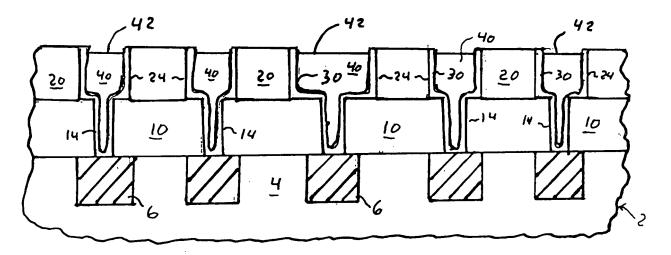


Fig. 3 (Prior Art)

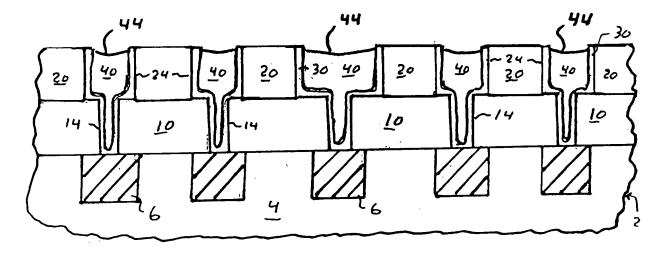
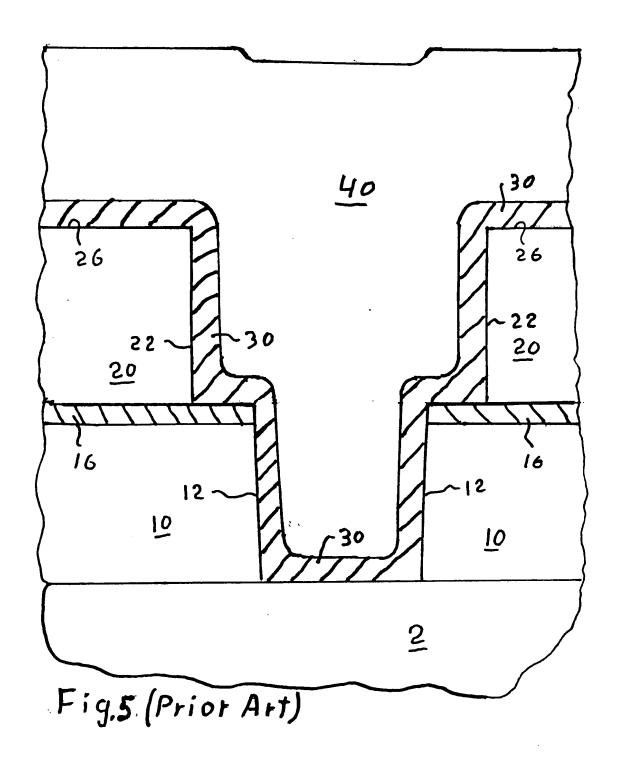
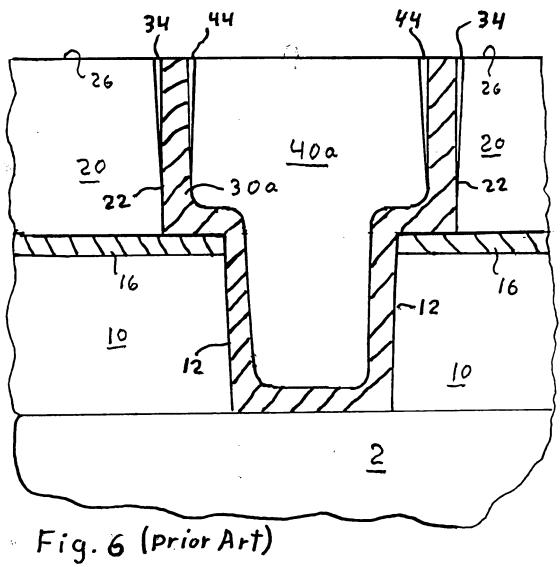
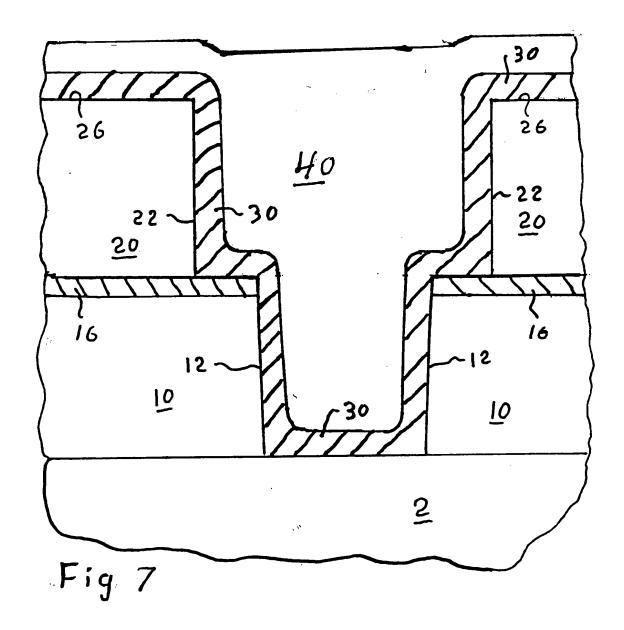
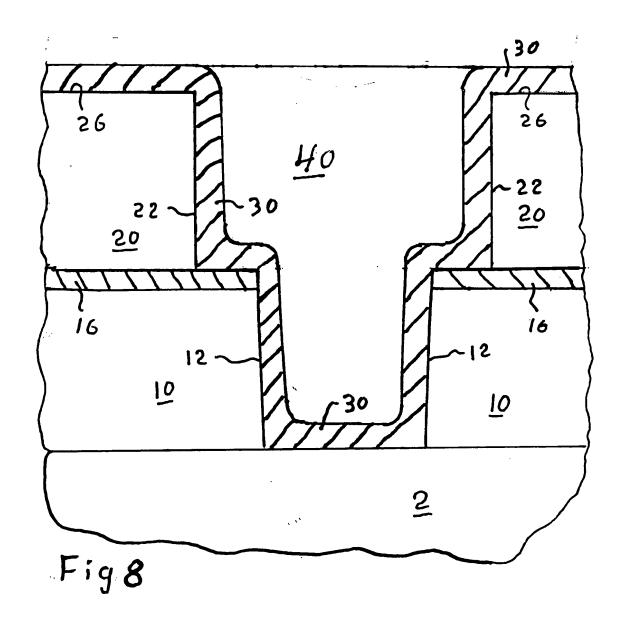


Fig. 4 (Prior Art)

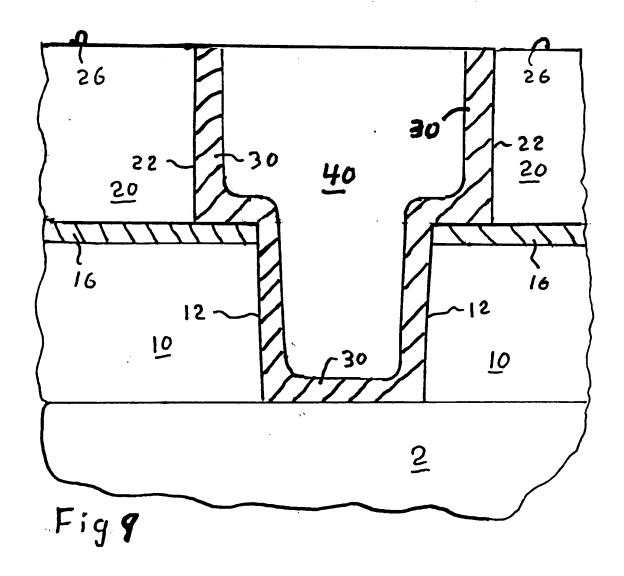








.



•

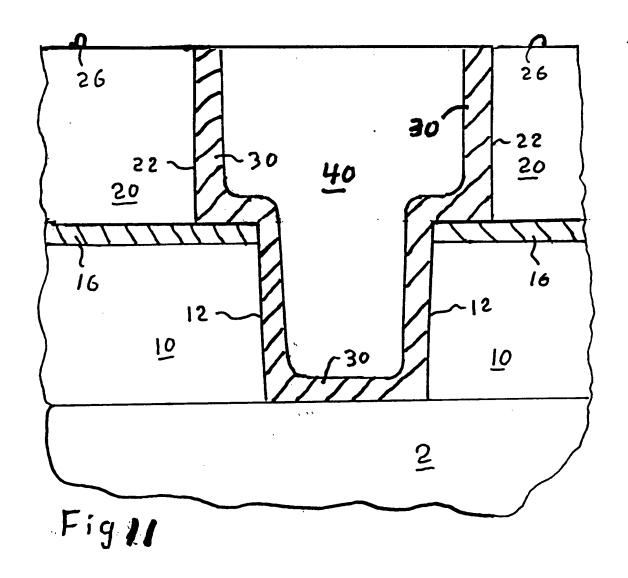
LINE WALLS OF OPENING IN LAYER OF DIELECTRIC MATERIAL OFINTEGRATED CIRCUIT STRUCTURE WITH BARRIER MATERIAL

FILL LINED OPENING IN LAYER OF DIELECTRIC MATERIAL WITH COPPER FILLER MATERIAL

THEN REMOVE FROM ABOUT _____ % TO ABOUT _____ % OF THE EXCESS COPPER ON BARRIER LAYER MATERIAL OVER TOP SURFACE OF LAYER OF DIELECTRIC MATERIAL BY CHEMICAL MECHANICAL POLISHING

THEN REMOVE REMAINING COPPER ON BARRIER LAYER MATERIAL OVER TOP SURFACE OF LAYER OF DIELECTRIC MATERIAL BY ELECTROPOLISHING

THEN REMOVE EXCESS BARRIER LAYER
MATERIAL OVER TOP SURFACE OF
LAYER OF DIELECTRIC MATERIAL BY DRY
ETCHING WITH ETCH SYSTEM SELECTIVE
TO COPPER AND DIELECTRIC MATERIAL



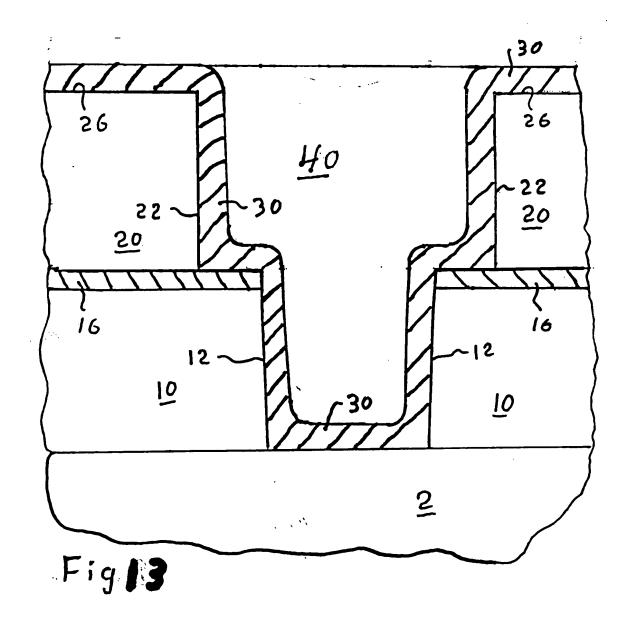
٠.٠

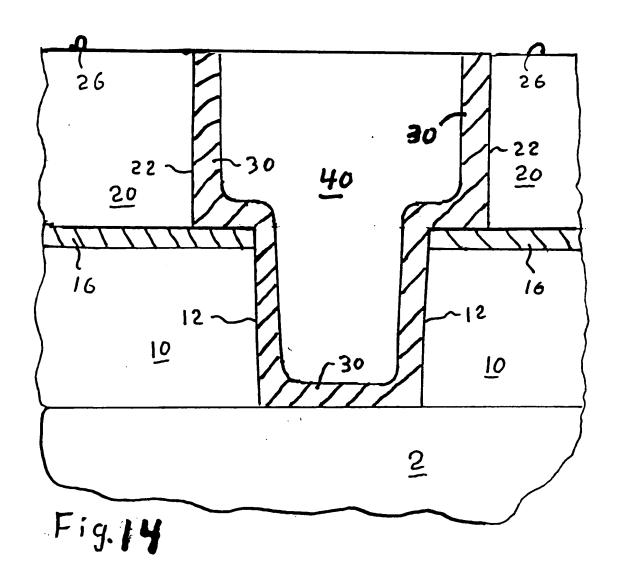
LINE WALLS OF OPENING IN LAYER OF DIELECTRIC MATERIAL OF INTEGRATED CIRCUIT STRUCTURE WITH BARRIER MATERIAL

FILL LINED OPENING IN LAYER OF DIELECTRIC MATERIAL WITH COPPER FILLER MATERIAL

THEN REMOVE EXCESS COPPER ON BARRIER
LAYER MATERIAL OVER TOP
SURFACE OF LAYER OF DIELECTRIC
MATERIAL BY ELECTROPOLISHING

THEN REMOVE EXCESS BARRIER LAYER
MATERIAL OVER TOP SURFACE OF
LAYER OF DIELECTRIC MATERIAL BY DRY
ETCHING WITH ETCH SYSTEM SELECTIVE
TO COPPER AND DIELECTRIC MATERIAL





LINE WALLS OF OPENING IN LAYER OF DIELECTRIC MATERIAL OF INTEGRATED CIRCUIT STRUCTURE WITH BARRIER MATERIAL

FILL LINED OPENING IN LAYER OF DIELECTRIC MATERIAL WITH COPPER FILLER MATERIAL

THEN REMOVE EXCESS COPPER ON BARRIER
LAYER MATERIAL OVER TOP
SURFACE OF LAYER OF DIELECTRIC MATERIAL
BY CHEMICAL MECHANICAL POLISHING

THEN REMOVE EXCESS BARRIER LAYER
MATERIAL OVER TOP SURFACE OF
LAYER OF DIELECTRIC MATERIAL BY DRY
ETCHING WITH ETCH SYSTEM SELECTIVE
TO COPPER AND DIELECTRIC MATERIAL